

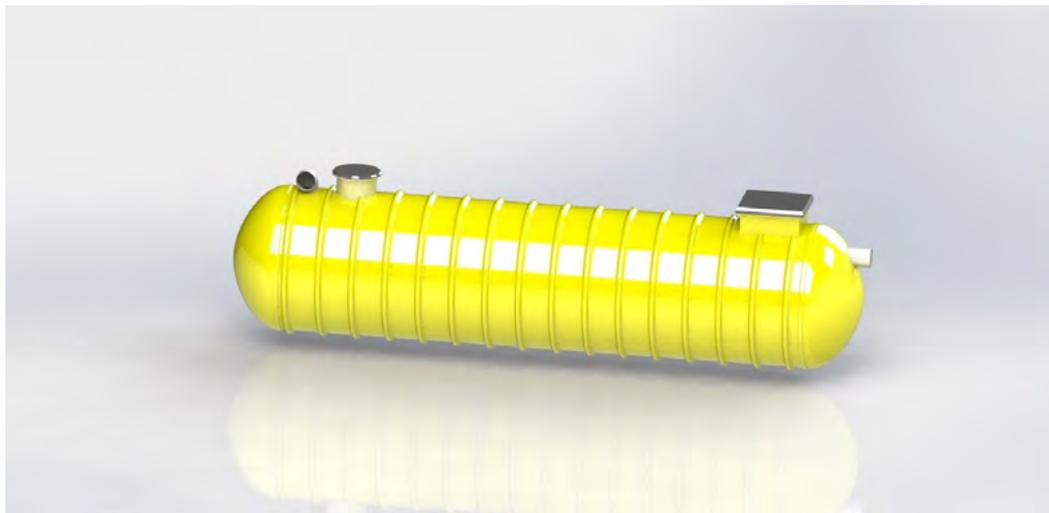


SPECIALIST
HYDRAPROTECTOR
STORMWATER TREATMENT

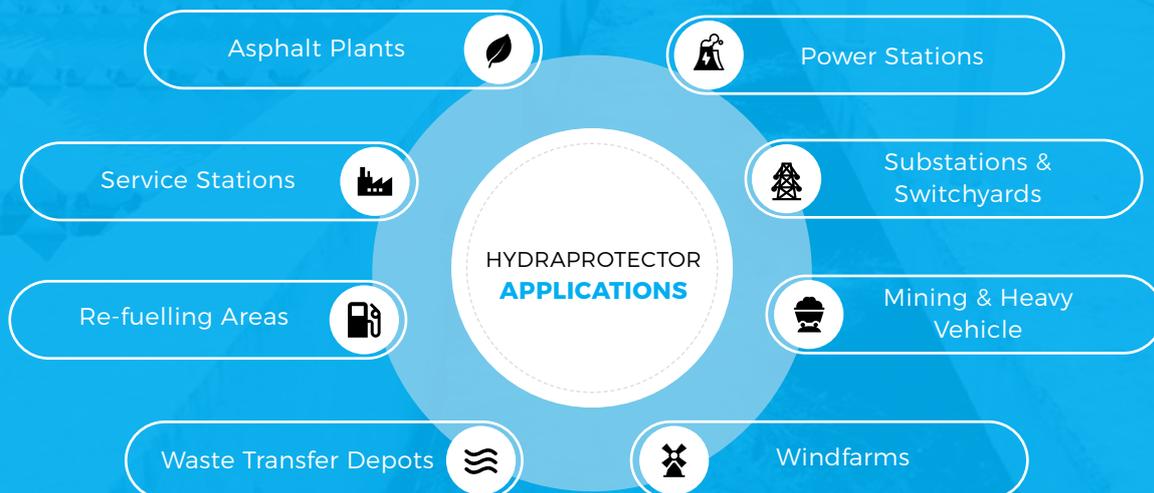
HYDRA PROTECTOR

The Hydraprotector is the most widely used separator where it is acceptable to treat the first flush and normal flows up to 6.5mm/hr rainfall. This covers approximately 90% of all rainfall events in Australia. Any excess rainfall is by-passed without treatment.

Leaks and spillages of oil and fuel are washed down drains every time it rains and, unless intercepted, find their way into water courses polluting reservoirs and rivers. This can have a disastrous effect on plants and wildlife. A substantial amount of oil pollution is collected in sites such as garage forecourts, large car parks and fuel storage depots and this must be intercepted to avoid the risk of prosecution.

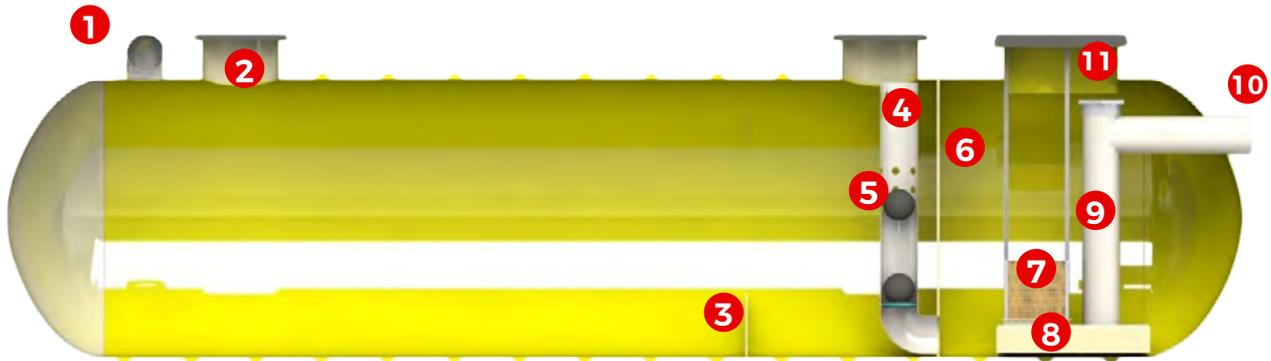


The Environment Agency has published Pollution Prevention Guidelines 'Use and Design of Oil Separators in Surface Water Drainage Systems: PPG3'. These set out the standards with which separators must comply and assist in deciding on the need for a separator at a site and the size and type that is appropriate. These Pollution Prevention Guidelines PPG3 require separators to be tested in accordance with the standard test procedure based on the European Standard BSEN858-1:2002



PRODUCT STRUCTURE

These are used when it is considered an acceptable risk not to provide full treatment for high and low water flow conditions, for example, where the risk of a large spillage and heavy rainfall occurring at the same time is small. They are especially suitable for situations where the main requirement is to trap spillages.



- | | |
|-----------------------------------|--|
| 1. Flame Dip Inlet | 8. Flow Director |
| 2. Silt Chamber inspection manway | 9. Discharge riser |
| 3. Silt Baffle | 10. Discharge Outlet |
| 4. Secondary Chamber Dropper Pipe | 11. Filter Guiderail removal system |
| 5. Automatic closure device | 12. Secondary Chamber manway and Filter removal access |
| 6. Secondary chamber baffle | |
| 7. Coalescing filter | |

FEATURES OF HYDRAPROTECTOR

 <p>Gravity operated</p>	 <p>Option of single, dual or triple chamber systems</p>	 <p>Coalesce Guiderail systems</p>
 <p>Ease of Maintenance</p>	 <p>Automatic Alarm/monitoring system</p>	 <p>Underground Installation system</p>
 <p>Full Retention and all liquid is treated with no bypass</p>	 <p>Coalesce stormwater treatment filter for separation of smaller droplets of contaminants</p>	 <p>Automatic closure device to prevent contaminants from discharging into waterways</p>

CLASS TYPES

Class 1 separators are designed to achieve a concentration of less than 5mg/L of oil under standard test conditions. This is required when it is necessary to removed majority of oil such as in:

-  Car Parking area runoff
-  Petrol Stations
-  Urban Environments

Class 2 Separators are designed to achieve a concentration of less than 100mg/L of oil. Suitable for lower quality requirement situations such as:

-  Oil/fuel handling areas
-  Industrial yards
-  Vehicle maintenance and wash down areas

TYPICAL SIZES AND RANGE

1200/1500 Series

-  1200/1500 series the popular range of HYDRAPROTECTOR for small to medium parking areas associated with smaller supermarkets and industrial estates.
-  These consist of 1200 diameter or 1500 diameter tanks that vary in length from 2 to 8m long and 2.5 to 9m long respectively

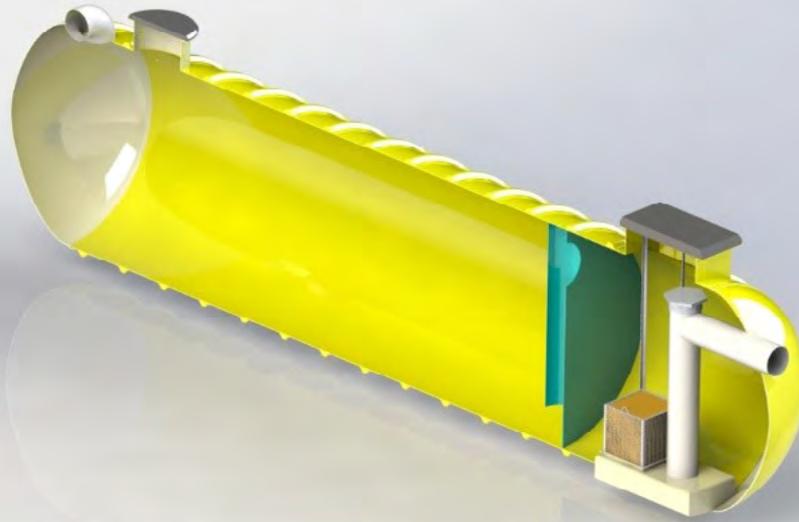
1850/2000 Series

-  1850/2000 series large capacity HYDRAPROTECTOR for supermarkets, hypermarkets and large vehicle parking areas, industrial complexes, docks, airport aprons etc.
-  This series consists of the 1850mm diameter and 2200 mm diameter. These have lengths of 4m to 10m and 4.5m to 12.5m respectively

2500/3000 Series

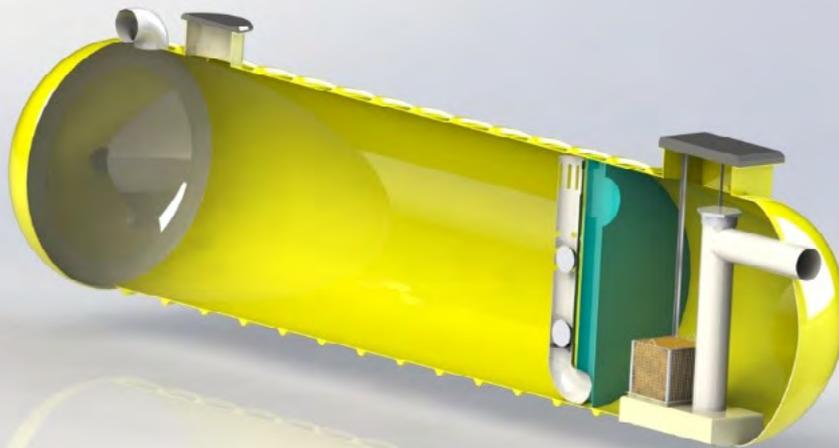
-  2500/3000 series the largest HYDRAPROTECTOR range, for catchment areas from eight hectares upward to more than 30 hectares. Details are supplied against specific schemes.
-  This series consists of the largest diameter cases, that being 2500mm or 3000mm diameter tanks. These have lengths of 4.5m to 16m and 5m to 18m respectively.

INSTALLATION CONFIGURATIONS



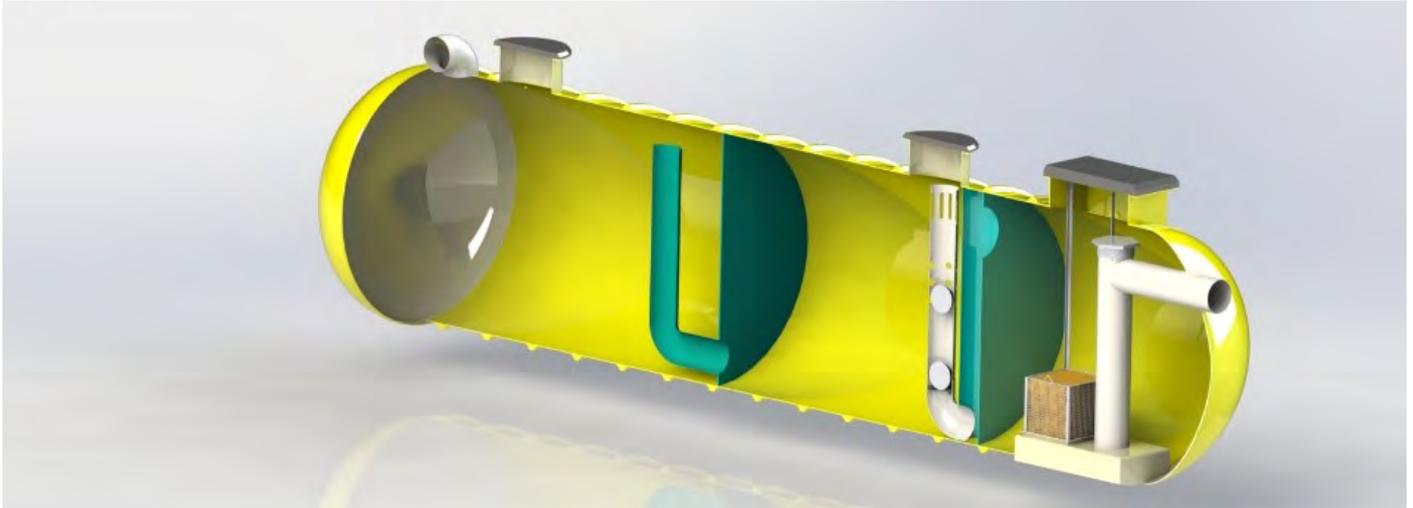
Single Chamber

Consists of a baffle, coalesce filter, flow director, discharge riser and inspection cap. Also includes the guiderail insertion system.



Dual Chamber with Automatic Closure Device

Additional extras for the dual chamber system include automatic closure device, coalesce filter in second chamber, dropper unit, dual access manways.



Triple Chamber

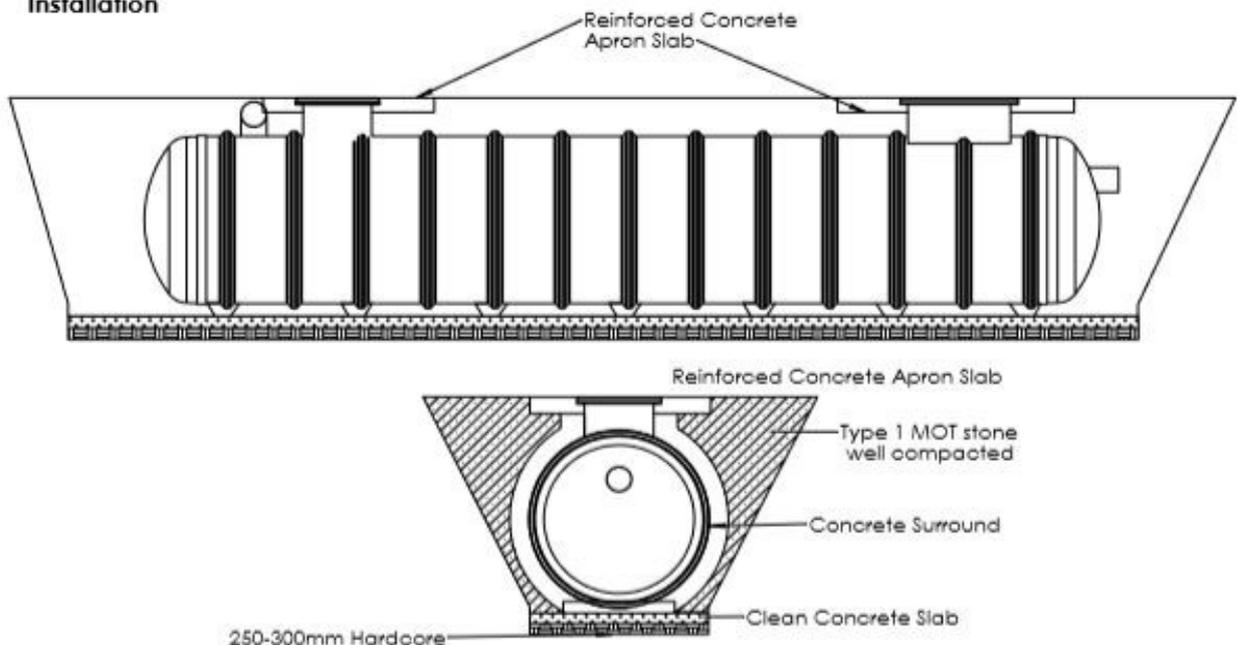
Initial Containment Chamber 1: Total Suspended Solids (TSS) silt, sediments, sludge and gross pollutants are trapped and settle on the chamber floor. Light liquids are skimmed off into Chamber 2.

Containment Chamber 2: Light liquids are contained and non-turbulent low through two horizontal treatment chambers uses the under low principle to retain light liquids in all low conditions.

Third Coalesce Chamber: Light liquids separation is enhanced, reducing to 5mg/L or less prior to discharge.

Typical Installation Practices

Installation



OTHER PRODUCTS

EcoProtector



Hydrodynamic, fill capture, high capacity gross pollutant Trap

StormProtector



Dual chamber, fine particle, sedimentation and organic pollutant removal treatment with large retention and Bypass.

HYDRAPROTECTOR

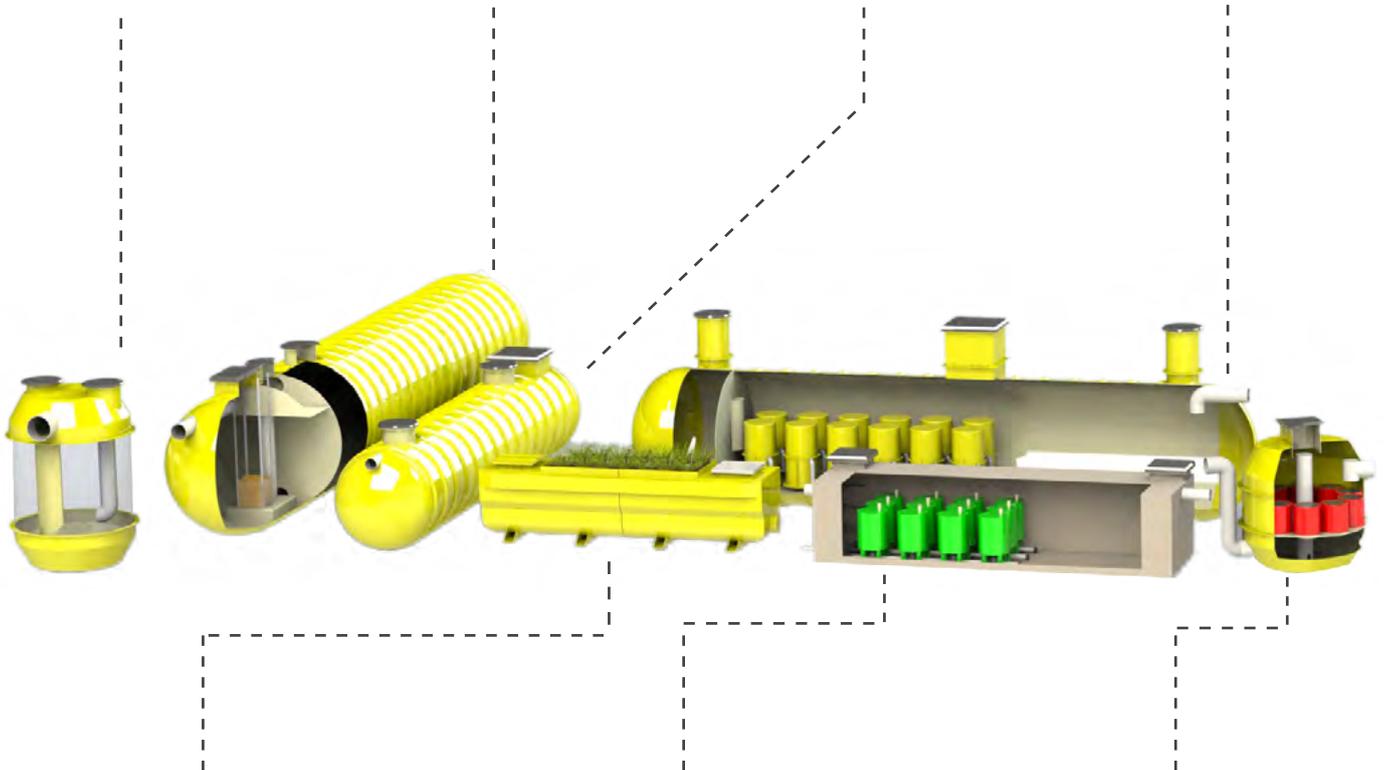


Highly efficient, full retention separator to treat first flush, fine particulates, nutrients, heavy metals and hydrocarbon filtration system.

MaxiProtector



Dual chamber, fine particle, sedimentation and organic pollutant removal treatment with large retention and Bypass.



BIOPROTECTOR



Hydrodynamic, fill capture, high capacity gross pollutant Trap

XTREAMPROTECTOR



Upflow filtration process designed to remove fine sediments, nutrients, heavy metals, phosphorus and hydrocarbons using our exclusive filter stack design.

EnviroProtector



Specialist stormwater filter for heavily polluted areas able to removing heavy metals, TSS, nutrients, hydrocarbons, designed to your requirements.



PROTECTOR

Treatment Stages	Product Requirement		Our Products
 <p>1. Primary Treatment Remove gross pollutants</p>	First flush with oil capture	Gross Pollutant Trap	
 <p>2. Secondary Treatment Remove fine particles, sedimentation & attached pollutants</p>	95% Hydrocarbon capture	Class 1 By-pass Separators	
		Class 1 Full Retention Separators	
 <p>3. Tertiary Treatment Removes very fine/colloidal nutrients & heavy metals</p>	Nutrient reduction and full sediment	90% TSS, 54% TP and 36% TN	
		Heavy Metal, TSS and Nutrient reduction	
		Heavy Metal, TSS and Nutrient	
		TSS, Sediments, nutrients, phosphorus and heavy metal removal	

KEEP IN TOUCH!



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